REMARKS/ARGUMENTS

In response to the Office Action mailed November 8, 2006, Applicants amend their application and request reconsideration. No claims are cancelled in this Amendment and new claim 19 is added so that claims 1-9, 11, 15, and 19 are now pending.

Claims 3-7, 11, and 15 were objected to but not rejected.

In this Amendment a typographical error in claim 6 is corrected. In addition, claim 1 is clarified. A part of examined claim 1 is removed and appears in new claim 19.

Claim 1 is amended to describe the basis upon which the voltage-vector adjusting unit adjusts duration of the outputting of voltage vectors. In order to make that adjustment, a comparison is made between the sensed or measured duration of outputting of the voltage vectors and a duration that is greater than zero. Claim 19 specifies that the voltage-vector adjusting unit ensures that a zero-voltage vector is output, if at all, for a duration longer than a fixed time and that that fixed time must be greater than zero. New claim 19 provides, as did examined claim 1, that the zero-voltage vector might not be output, i.e., might have a duration of zero. Further, claim 19 specifies that when the duration is not zero, the duration of the zero-voltage vector must be longer than a fixed, i.e., minimum, time.

The amendment to claim 1 and new claim 19 are clearly supported by the patent application as filed. For example, the comparison mentioned in the clarified language of claim 1 is supported by the description appearing in the specification from page 21, line 16 through page 22, line 1. This comparison is also described at other locations within the specification. Many passages in the patent application, for example the paragraph at page 22, lines 2-5, refer to the minimum zero-voltage vector output time Tz. That minimum output time Tz is not a calculated time but is an actual time to which the duration of the zero-voltage vector duration is sometimes adjusted.

For example, see page 17, lines 13-23 of the patent application. Since Tz is an actual time, it can never negative as a calculated time could be. for example, in the reference applied in rejecting certain claims. Stated another way, Tz must always be at least zero.

The patent application further demonstrates that Tz can never be "zero". For example, according to the flowchart of Figure 15, described in the patent application at pages 28-31, in steps ST11 and ST20, the minimum zero-voltage vector duration, i.e., the fixed time, must be greater than one-half Tz. See step ST20. Further, according to step ST11, the same sum must be greater than Tz. These relationships cannot be fulfilled and accurate if Tz is zero because, in that instance, Tz would equal one-half Tz.

Additional support for the amendment of claim 1 and new claim 19 can be found in the patent application at pages 30 and 31. In the invention, the duration of the output of the voltage vectors is compared with a predetermined duration, sometimes called the threshold duration. At page 29, line 20 of the patent application this threshold is referred to as a boundary. In the passage from page 30, line 25 to page 31, line 10 this threshold or boundary duration is generally one-half Tz.

Since, as already demonstrated, Tz is greater than zero, so is the value of the boundary which is set as the reference duration to which the comparison is made in amended claim 1. In other words, that reference duration, as expressly stated in claim 1, is a duration longer than zero. Clearly, the patent application fully supports the amendment of claim 1.

The claims not indicated as allowable, namely claims 1, 2, 8, 9 were rejected as anticipated by Xu (U.S. Patent 5,552,977). This rejection is respectfully traversed.

It is apparent in considering the rejection based upon Xu, and particularly the comments that appear at the end of page 2 and continue onto page 3 of the Office Action, that Figure 8 of Xu is the focus of attention. The Examiner expressly pointed to the flowchart of Figure 8 of Xu and asserted that the voltage-vector adjusting unit of claim 1 is met by the disclosure of Xu, particularly concerning the functions

illustrated in Xu's flowchart of Figure 8. In that flowchart, in a step 122, a comparison is made to determine whether the duration of the zero-voltage vector is negative, i.e., less than zero. That less-than-zero reference was cited in the Office Action as being comparable to the fixed duration described in examined claim 1. This application of Xu to the claim 1 that was previously presented is understood but cannot be made with respect to the amended claims.

As already explained, it is impossible for the duration of the comparison of claim 1 to be less than zero because the duration of the invention is an actual time, not a calculated time, as in Xu. One of skill in the art would never make the comparison shown in step 122 of Figure 8 of Xu to the voltage vectors of the invention, because that comparison could never produce a "no" answer. Further, in amended claim 1, the comparison is made to a reference duration that is, itself, greater than zero.

Since anticipation requires that a single prior art publication meet every limitation of a claim, it is apparent that the rejection for anticipation based upon Xu cannot be properly maintained. Not only is the comparison in step 122 of Xu not rational for the present invention, that comparison is not made in the invention. Accordingly, there can be no anticipation and, upon reconsideration, the anticipation rejection should be withdrawn as to all of claims 1, 2, 8, and 9.

In addition to the clear basic distinction of the invention of claim 1 from Xu, the advantage achieved or suggested by the invention is not achieved by Xu. Establishing the duration of outputting of the voltage vectors based upon the comparison described in amended claim 1 results in a reduction in the average error of the zero-voltage vector output duration. See the patent application at page 29, lines 20-23. In other words, not only is the invention as defined by the present claims different from Xu, the absence from Xu of the advantage achieved by the invention demonstrates that the invention is not suggested by Xu. Accordingly, upon

reconsideration, the rejection of claims 1, 2, 8, and 9 should be withdrawn and all claims now pending should be allowed.

Respectfully submitted,

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